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School Satisfaction and School Pressure in the WHO European Region and North America: An Analysis of Time Trends (2002–2018) and Patterns of Co-occurrence in 32 Countries

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A B S T R A C T

Purpose: The purpose of the study was to examine the trends between 2002 and 2018 in school pressure and school satisfaction among 15-year-old students, across countries and by gender, in the WHO European region and North America, and explore whether there are variations between countries and by gender in the co-occurrence of school pressure and school satisfaction.
Methods: Data from the 32 countries that participated in the Health Behaviour in School-aged Children study (HBSC) study between 2002 and 2018 were used. Statistical analyses included t-tests, binary logistic regression analyses, and chi-square tests, as required by each of the study aims.
Results: School satisfaction tended to increase over the period 2002–2018 among boys, whereas school pressure increased among girls. Also, gender differences tended to dissipate in school satisfaction and generally increase in school pressure. The co-occurrence of school satisfaction and school pressure in 2017/2018 shows that the majority of students are found in the "not pressured–not highly satisfied" and "pressured–not highly satisfied" groups. There were more boys in the former group and more girls in the latter group.
Conclusion: Few students in the 32 countries belonged to the "not pressured–highly satisfied" group, which from a public health perspective may be seen as the most desirable group. The

IMPLICATIONS AND CONTRIBUTION

This study revealed two predominant trends: school satisfaction tended to increase among boys, and school pressure increased among girls. Few students belonged to the "not pressured-highly satisfied" group in 2017/18. There was variability across countries, but no clear patterns associated to geographical location or differences in educational systems were apparent.

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increases in school pressure in girls from 2002 to 2018 and their overrepresentation in the pressured groups require further attention.

Children and adolescents' experiences at school influence their cognitive development, physical and mental health, and future educational decisions and opportunities [1–5]. A supportive school environment promoting school satisfaction can be protective and an asset for health-enhancing behaviors, health, and life satisfaction [6]. On the other hand, a nonsupportive school environment and school-related stress can be risk factors for developing unhealthy behaviors, as well as academic failure [1,2,7–11].

School satisfaction refers to a student's subjective cognitive appraisal of the quality of his or her school life and can be linked to the construct of quality of life [12,13]. Specifically, school satisfaction has been considered an often neglected but fundamental domain for the understanding of students' quality of life, including positive cognitive assessments and emotions related to one's life [13]. High levels of school satisfaction are associated with academic achievement [6,14]. Further, during school years, the experience of mastery and a sense of well-being at school contribute to students' life satisfaction [13]. On the other hand, low school satisfaction has been shown to be associated with risk behaviors, such as substance use [15–17], and with lower self-rated health and increased somatic and psychological symptoms [18,19].

According to self-determination theory, students' high level of school satisfaction may be understood as a high internal motivation resulting from experienced high autonomy (perceived responsibility for own learning), high relatedness (having good friends and working well with them at school), and high experience of mastery and competence when performing learning tasks in school [20,21]. On the other hand, the negative effects of low school satisfaction can be understood as a consequence of low motivation in school, where lack of perceived social support (from classmates and teachers) may be of particular importance [22]. In the absence of high school–related motivation, students may turn for motivation and engagement outside school, prioritizing more time with friends and experimental substance use, with such engagement potentially being seen as an opposition toward school and school values [23].

The exposure to academic demands facilitates learning and development but may also be a source of stress during adolescence. According to the transactional model of stress and coping [24], school pressure can be seen as a consequence of an imbalance between school demands and available resources to meet them, and can have negative effects on well-being. In fact, several studies have shown an association between school-related stress, measured as perceived school pressure and poor health and increased health risk behaviors [1,2,8,9,25]. Experiencing school-related stress may also impede students' academic performance [7].

As adolescents move through the educational system, they are subjected to greater academic demands and expectations. An international comparative survey showed a marked increase in school pressure in the transition through adolescence [26]. It also showed consistent gender and age differences over time. Except for children at 11 years of age, girls reported higher levels of school pressure than boys and school pressure was higher in older age groups [26]. In contrast, generally girls reported higher school satisfaction and this decreased with age [13,27,28].

Previous studies have shown that there are several possible patterns of positive school experience and also for negative school experiences [29,30]. A Finnish study on school engagement and burnout among high school students showed that four hypothesized combinations of high or low engagement and high or low burnout occurred and that engaged students showed the most adaptive pattern of well-being and motivation. Additional studies utilizing combinations of students' perceptions of their school life, such as school satisfaction and school pressure, are needed to enhance the understanding of students' varying needs.

Perceptions of school pressure and school satisfaction might be related to the national context in which they are experienced and to historical structures and events that partly create the educational system children encounter. The relevance of such national context influences is supported by large variations in young people's experiences and perceptions of school across national settings [28,31,32]. Education systems regulate the way schools operate, thereby influencing adolescents' school experiences. The degree of comprehensiveness versus stratification is an essential factor. On average, across OECD countries, education systems begin tracking students for different programs at the age of 14 years, but there is great variation (from age 10 to 16 years) depending on the country [33]. Different countries also have different types of organization in primary and secondary education, mainly, single structure, common core curriculum, and differentiated branches [34].

As summarized in the previous paragraphs, there is robust evidence in the literature that school satisfaction and school pressure are related to, positively or negatively, students' academic achievement, as well as to physical and mental well-being. In contrast, aspects such as cross-country differences, time trends, and patterns of co-occurrence in key school determinants of health have been less frequently examined, despite their great interest from a health perspective. The Health Behaviour in School-aged Children (HBSC) study provides a unique opportunity to explore jointly pupils' perceptions of school pressure and school satisfaction across a large number of countries. That way, the HBSC study can provide initial insights into whether cross-country differences in trends or in the co-occurrence of school satisfaction and school pressure exist that may be attributable to differences in education systems and education policies across Europe and North America or that need closer examination.

The aim of this article is twofold. First, we will examine the stability or change of perceived school satisfaction and school pressure from 2002 to 2018 among 15-year-old students by gender and across countries. Second, we will focus on the latest survey round (2017/2018) and explore whether there is variation between countries and by gender in profiles of school pressure and school satisfaction (i.e., how these variables "co-occur"). Specific research questions are as follows:

1) Do levels of school satisfaction (among boys and girls) vary between the HBSC countries and across time?
2) Do levels of school pressure (among boys and girls) vary between the HBSC countries and across time?
3) How do school pressure and school satisfaction co-occur (among boys and girls) in the latest survey round, and do they vary between the HBSC countries?

Methods

Participants

The HBSC study is a World Health Organization collaborative cross-sectional study currently conducted in 49 countries across Europe and North America. Data collection procedures in all countries were conducted in accordance with a standardized international protocol, and ethical consent was obtained in each participating country. Data are collected in school settings every four years from a nationally representative random cluster sample of 11-, 13-, and 15-year-old adolescents in each participating country. Although we use the term country in this and following sections, it must be noted that in Belgium, separate data collections are conducted in different national regions (Flemish and French). The primary sampling units are classes within schools. More detailed information about methodology of the HBSC study is reported elsewhere [35].

In this article, data from 32 of the 49 countries in the latest survey round are used. Those 32 countries are the ones that participated in the five HBSC surveys (2001/2002, 2005/2006, 2009/2010, 2013/014, and 2017/2018) needed for the trend analyses from 2002 to 2018: Austria, Belgium (Flemish), Belgium (French), Canada, Croatia, Czechia, Denmark, England, Estonia, Finland, France, Germany, Greece, Greenland, Hungary, Ireland, Italy, Latvia, Lithuania, North Macedonia, Netherlands, Norway, Poland, Portugal, Russia, Scotland, Slovenia, Spain, Sweden, Switzerland, Ukraine, and Wales. Israel was excluded, due to delays in the 2017/2018 data collection.

As the prevalence of perceived school pressure increases with age and school satisfaction decreases with age, the analyses focus on a single age group, 15-year-old students (for sample size by country in each survey round, see Table 1). Focusing on 15-year-old students allows for examining school environments at a decisive point in which students' mental well-being may not be sufficiently supported.

Variables and measures

Gender, survey year, and country are the independent variables in our analyses, which focus on the following dependent variables:

School pressure. Students were asked "How pressured do you feel by the schoolwork you have to do?" with four response options: not at all (1); a little (2); some (3); and a lot (4). Consistent with previous international reports and publications from the HBSC study [26,28], these answers were categorized as pressured (answer options 3 and 4) versus not pressured (answer options 1 and 2). The measure applied in the HBSC study is well functioning and has been validated in several countries and included in other validated subscales measuring school pressure [2,26].

School satisfaction. Students were asked 'How do you feel about school at present?' and offered the four answer options: I like it a lot (4); I like it a bit (3); I don't like it very much (2); and I don't like it at all (1). Consistent with previous international HBSC study reports [32] and our focus on high levels of school satisfaction, we dichotomized this variable as high (answer option 4) and not high (answer options 1 to 3) school satisfaction.

Statistical analyses

IBM SPSS Statistics 22 was used to perform the analyses. To address research questions 1 and 2, we calculated the prevalence of high school satisfaction and feeling pressured by schoolwork for boys and girls across survey years (2002, 2006, 2010, 2014, and 2018) and stratified by country (n = 32). To test significant differences between boys and girls, we calculated the *z*-ratio ($p < .05$) for each survey year in each country. Binary logistic regression was used to evaluate trends in school satisfaction and school pressure for all five survey rounds (overall trend). School satisfaction and school pressure were the dependent variables and year of data collection (1 = 2001/2002, 2 = 2005/2006, and so forth) was the independent variable. Only individuals with complete data on each outcome in the five examined survey rounds were included in the analyses. Odds ratios (OR) with 95% confidence intervals (95% CI) were calculated. *P*-values ($p < .05$) were used to assess if the differences over time were significant or not, and ORs provided an indication of the magnitude of the overall changes, if any. ORs (and 95% CI) values >1 are indicative of an increasing overall trend whereas ORs (and 95% CI) values < 1 indicate a decreasing overall trend. No significant change can be concluded if OR = 1 or if 1 is included in the 95% CI.

Finally, for the co-occurrence of school pressure and school satisfaction (research question 3), we focused on individuals with complete data on school satisfaction and school pressure in the latest survey round (2017/2018) and took into consideration the following four groups: not pressured–not highly satisfied, not pressured–highly satisfied, pressured–not highly satisfied, and pressured–highly satisfied. Specifically, the distribution of students among the four aforementioned groups was examined across countries, with chi-square test and ϕ being used to identify significant differences with a noticeable effect size ($p < .05$ and $\phi \geq .10$) between countries. We also tested gender differences in the students' distribution among the four groups within each country, for which we also used chi-square test and ϕ to identify significant differences with a noticeable effect size ($p < .05$ and $\phi \geq .10$). If noticeable country or gender differences existed, corrected standardized residuals ($zres \geq 3$) were used to identify the specific subgroups in which proportions were noticeably higher or lower than expected.

Results

The results of time-trends analyses for school satisfaction (see Table 2) show that there is variability in trends across countries and by gender. In general, there is no change in school satisfaction among girls in half of the countries (16 of the 32 countries), whereas an increase is the predominant trend among boys (17 of the 32 countries). An increase in school satisfaction during the period from 2002 to 2018 is found in both boys and girls from Croatia, Finland, France, Lithuania, Poland, Russia, and Ukraine. According to ORs, the most marked increases in both genders were found in Ukraine, Poland, Lithuania, and Finland. In Greece,

Table 1
Sample size (total) by country, survey year, and gender

Country	2002		2006		2010		2014		2018	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Austria	643	634	693	801	885	935	545	719	616	731
Belgium (Flemish)	1,027	1,003	831	785	680	546	1,021	696	711	749
Belgium (French)	631	750	731	683	669	672	924	1,008	437	463
Canada	528	679	1,095	1,194	2,685	2,756	2,506	2,467	2,094	2,198
Croatia	619	816	773	857	1,197	1,227	1,031	915	1,052	1,060
Czechia	806	854	842	823	747	775	852	908	1,934	1,880
Denmark	656	713	762	790	577	649	584	679	392	374
England	801	963	709	742	494	624	816	792	432	432
Estonia	619	648	801	786	661	737	638	631	759	783
Finland	867	874	790	895	1,008	1,102	956	1,009	531	545
France	1,301	1,313	1,139	1,083	904	1,002	865	875	1,114	1,212
Germany	842	899	1,271	1,281	736	904	1,061	1,043	659	858
Greece	643	681	650	766	842	806	638	682	659	651
Greenland	100	138	207	210	189	208	157	163	168	146
Hungary	498	812	550	637	799	934	535	565	506	639
Ireland	345	574	914	771	962	733	576	944	529	554
Italy	541	679	678	657	764	782	640	622	581	720
Latvia	481	631	628	702	666	709	784	942	660	682
Lithuania	981	923	940	921	945	847	904	794	572	610
Netherlands	637	636	672	691	730	727	658	699	720	803
North Macedonia	672	727	952	944	814	722	742	715	736	760
Norway	799	823	818	716	711	628	467	503	327	350
Poland	1,022	1,105	1,092	1,195	685	725	700	784	852	929
Portugal	378	422	613	770	680	873	630	730	664	751
Russia	1,138	1,436	1,238	1,516	919	928	659	786	852	966
Scotland	578	571	1,108	1,090	1,232	1,335	951	918	684	735
Slovenia	543	509	780	781	914	901	744	871	898	815
Spain	821	935	1,519	1,546	962	1,041	1,761	1,998	753	792
Sweden	609	609	752	774	1,059	1,031	1,358	1,408	771	825
Switzerland	770	731	733	767	1,138	1,108	1,100	1,112	1,208	1,186
Ukraine	730	871	835	994	881	1,016	792	902	1,042	983
Wales	603	561	675	675	855	782	729	703	2,167	2,167

Netherlands, North Macedonia, Portugal, and Wales results indicate a significant decrease for both boys and girls. ORs also indicate that Greece, Portugal, and Wales experienced the most marked decreases during the examined period.

In addition, trends are different in boys and girls in a number of countries. Specifically, school satisfaction increased in boys while remaining unchanged in girls in Denmark, Estonia, Germany, Greenland, Hungary, Ireland, Latvia, Slovenia, Spain, and Sweden. In Canada, Czechia, and England, we find no changes in school satisfaction for boys and a decrease in girls. In Belgium (French), there is no change in boys and an increase in girls.

Regarding school pressure (see Table 3), there is also variability in trends during the study period across countries and genders. In general, there tends to be an increase in school pressure in girls (20 of the 32 countries), whereas in boys we find a similar number of countries with increasing trends (11 countries), decreasing trends (12 countries), and no change (9 countries). When looking at trends within country, there is an increase in school pressure during the study period for both boys and girls in Belgium (French), Croatia, Czechia, Finland, France, Ireland, Italy, North Macedonia, Netherlands, Scotland, and Spain. Based on ORs, the most marked increases are found in Scotland, Netherlands, Belgium (French), and Finland. In Greece, Greenland, Lithuania, Poland, Russia, and Ukraine, we find a decrease in school pressure also in both groups. School pressure was unchanged for both boys and girls in England and in Sweden.

In other cases, trends are different in boys and girls. School pressure increased in girls and remained unchanged in boys in Austria, Belgium (Flemish), Canada, Denmark, Germany, Norway and Switzerland. In contrast, in Estonia, Hungary, Latvia and Portugal, there is a decrease in boys and no significant change in girls. Finally, in Slovenia and Wales, we find a decrease in boys and an increase in girls.

Taking into consideration the results from Tables 2 and 3 (research questions 1 and 2), a positive pattern characterized by marked increases in school satisfaction and a decrease in school pressure in both boys and girls is found only in three countries: Lithuania, Poland, and Ukraine. At the other end, we find two countries, North Macedonia and Netherlands, where decreases in school satisfaction and increases in school pressure are found in both genders, with Netherlands being one of the countries with most marked increases in school pressure.

Finally, our analyses of the co-occurrence of school satisfaction and school pressure in the latest survey round (see Table 4) show that most countries (26 of the 32 countries) show noticeable gender differences (i.e., $p < .05$ and $\phi \geq .10$) in the distribution of students among the four groups (not pressured–not highly satisfied, not pressured–highly satisfied, pressured–not highly satisfied, and pressured–highly satisfied). The exceptions are Austria, Belgium (Flemish), Germany, Russia, Switzerland, and Ukraine, where gender differences were either not significant ($p > .05$) or did not reach a noticeable effect size ($\phi < .10$). In countries where gender differences reached a

Table 2
School satisfaction among 15-year-old students by gender, survey year, and country

Country	Gender	2002 (%)	2006 (%)	2010 (%)	2014 (%)	2018 (%)	B	OR	95% CI	*p*
Austria	Boys	27.1	29.7	25.4	36.5	24.2	−.002	.998	.945–1.055	.954
	Girls	23.4	31.8	28.3	31.8	21.1	−.033	.967	.918–1.020	.218
Belgium (Flemish)	Boys	9.3	12.3	12.0	16.0	8.4	.049	1.050	.983–1.122	.144
	Girls	11.8	**16.7**	14.7	15.7	9.1	−.041	.960	.901–1.023	.204
Belgium (French)	Boys	5.9	7.6	12.6	4.4	13.0	.093	1.098	.998–1.207	.055
	Girls	**9.1**	9.6	13.3	6.5	**18.5**	.101	1.107	1.021–1.200	.014
Canada	Boys	13.7	22.4	18.7	19.3	17.9	−.007	.993	.948–1.041	.782
	Girls	**19.5**	**31.1**	**22.7**	18.7	18.0	−.137	.872	.837–.909	<.001
Croatia	Boys	5.8	7.5	5.3	9.1	**13.4**	.249	1.282	1.180–1.393	<.001
	Girls	6.4	6.7	6.9	9.4	8.0	.084	1.088	1.005–1.177	.036
Czechia	Boys	7.8	8.7	14.2	10.1	8.2	−.009	.991	.932–1.055	.783
	Girls	**10.8**	11.2	**18.5**	**13.5**	8.8	−.059	.943	.892–.997	.038
Denmark	Boys	12.9	17.7	16.7	21.5	19.6	.127	1.135	1.057–1.219	<.001
	Girls	**17.3**	18.2	**24.1**	23.4	15.7	.048	1.050	.983–1.121	.148
England	Boys	14.8	25.5	14.8	**22.3**	13.1	.000	1.000	.938–1.066	.994
	Girls	15.6	24.1	18.7	16.2	9.0	−.097	.907	.851–.967	.003
Estonia	Boys	5.3	5.3	4.1	**9.6**	8.6	.180	1.198	1.087–1.319	<.001
	Girls	**9.3**	6.2	**9.8**	6.5	7.1	−.053	.949	.869–1.035	.234
Finland	Boys	4.0	8.8	7.7	9.1	10.4	.188	1.207	1.105–1.318	<.001
	Girls	4.6	11.5	**12.8**	**12.7**	11.0	.174	1.190	1.105–1.282	<.001
France	Boys	9.7	10.6	20.6	20.4	13.9	.144	1.155	1.096–1.216	<.001
	Girls	**15.7**	12.8	**28.4**	**24.5**	**17.5**	.089	1.093	1.044–1.144	<.001
Germany	Boys	14.3	18.1	19.6	18.7	18.2	.057	1.059	1.000–1.120	.048
	Girls	14.5	19.7	19.7	17.9	18.4	.034	1.034	.981–1.090	.210
Greece	Boys	13.9	12.8	6.5	4.6	8.5	−.231	.793	.727–.865	<.001
	Girls	15.7	**17.3**	**13.1**	**7.6**	8.0	−.238	.788	.732–.850	<.001
Greenland	Boys	13.3	17.5	30.5	26.8	**24.1**	.168	1.183	1.038–1.348	.012
	Girls	14.0	**27.0**	31.7	26.5	10.0	−.047	.954	.843–1.080	.458
Hungary	Boys	22.4	27.0	30.5	28.2	33.7	.116	1.123	1.057–1.195	<.001
	Girls	**37.9**	**42.7**	**47.5**	**40.9**	38.7	.008	1.008	.961–1.057	.750
Ireland	Boys	9.5	13.0	12.9	19.6	13.0	.104	1.110	1.024–1.203	.012
	Girls	**22.0**	**20.2**	**20.4**	22.0	16.1	−.049	.952	.895–1.013	.121
Italy	Boys	7.0	9.4	7.2	7.9	9.4	.038	1.039	.945–1.142	.428
	Girls	**11.0**	8.4	**10.2**	10.0	9.1	−.024	.976	.901–1.057	.551
Latvia	Boys	12.5	16.0	22.2	22.8	19.7	.133	1.143	1.069–1.221	<.001
	Girls	**19.7**	**24.1**	**30.6**	26.6	16.1	−.023	.977	.924–1.033	.413
Lithuania	Boys	14.4	24.5	28.5	32.7	27.9	.214	1.238	1.176–1.304	<.001
	Girls	**20.1**	27.7	**38.7**	35.1	**41.3**	.239	1.269	1.209–1.333	<.001
Netherlands	Boys	21.4	24.0	18.9	25.5	11.9	−.116	.891	.839–.946	<.001
	Girls	21.9	**31.7**	**28.7**	24.8	**16.6**	−.108	.898	.850–.948	<.001
North Macedonia	Boys	52.0	43.9	47.8	42.6	38.7	−.108	.898	.857–.940	<.001
	Girls	**57.9**	**51.5**	51.0	47.3	38.1	−.175	.839	.802–.879	<.001
Norway	Boys	30.9	29.0	28.7	36.3	27.7	.008	1.008	.949–1.071	.790
	Girls	32.0	31.1	31.1	35.6	28.6	−.002	.998	.942–1.058	.954
Poland	Boys	6.8	13.0	14.9	27.8	**26.8**	.389	1.476	1.394–1.562	<.001
	Girls	**10.4**	14.5	17.5	29.6	20.9	.241	1.273	1.209–1.341	<.001
Portugal	Boys	20.4	17.5	15.8	14.2	8.0	−.227	.797	.737–.861	<.001
	Girls	19.3	18.5	**22.1**	10.8	10.8	−.197	.821	.766–.880	<.001
Russia	Boys	12.5	14.6	19.8	23.2	13.6	.081	1.085	1.027–1.145	.004
	Girls	13.4	14.3	20.7	22.2	13.3	.063	1.065	1.013–1.119	.014
Scotland	Boys	14.7	12.4	14.4	12.9	14.3	.003	1.003	.937–1.074	.922
	Girls	12.7	**16.3**	14.1	11.7	14.1	−.035	.966	.904–1.033	.311
Slovenia	Boys	35.5	38.0	38.4	49.4	**39.6**	.072	1.075	1.025–1.127	.003
	Girls	36.3	**44.0**	36.7	46.8	34.0	−.019	.981	.935–1.030	.441
Spain	Boys	8.2	9.2	12.5	13.1	10.9	.114	1.121	1.051–1.197	.001
	Girls	**12.9**	**17.1**	15.3	**16.6**	**16.2**	.040	1.041	.987–1.097	.138
Sweden	Boys	13.2	11.5	13.9	**20.5**	**15.1**	.125	1.133	1.063–1.209	<.001
	Girls	13.2	11.4	13.6	17.5	11.7	.043	1.044	.978–1.114	.197
Switzerland	Boys	15.4	16.2	12.7	13.4	16.1	−.001	.999	.943–1.059	.980
	Girls	14.6	19.8	**16.3**	**16.6**	17.8	.022	1.022	.968–1.080	.429
Ukraine	Boys	9.0	12.1	31.1	33.4	29.8	.347	1.415	1.342–1.493	<.001
	Girls	9.5	13.9	29.5	**40.4**	30.1	.372	1.450	1.379–1.525	<.001
Wales	Boys	**18.1**	17.3	18.0	15.9	**9.4**	−.194	.823	.780–.869	<.001
	Girls	13.4	19.0	17.2	16.8	7.2	−.215	.807	.762–.854	<.001

If there is a significant difference between genders, the prevalence is written in bold for the gender with the highest prevalence ($p < .05$). Values indicate change in school satisfaction across survey years (overall trend).
B = regression coefficient; OR = odds ratio; 95% CI = 95% confidence interval.

Table 3
School pressure among 15-year-old students by gender, survey year, and country

Country	Gender	2002 (%)	2006 (%)	2010 (%)	2014 (%)	2018 (%)	B	OR	95% CI	*p*
Austria	Boys	32.1	23.9	25.6	27.7	29.0	−.013	.987	.934–1.044	.654
	Girls	31.7	23.0	26.5	26.7	**35.6**	.068	1.070	1.015–1.127	.011
Belgium (Flemish)	Boys	33.5	31.4	35.0	35.5	32.3	.011	1.012	.967–1.058	.617
	Girls	32.6	31.7	36.9	**48.6**	**37.6**	.114	1.120	1.071–1.172	<.001
Belgium (French)	Boys	19.8	21.7	18.0	27.4	34.3	.180	1.197	1.126–1.274	<.001
	Girls	**31.4**	**36.2**	**34.3**	**47.4**	**60.5**	.274	1.315	1.249–1.384	<.001
Canada	Boys	48.4	48.9	45.9	42.2	50.9	.009	1.009	.972–1.046	.646
	Girls	50.2	**56.0**	**55.5**	**56.0**	**65.9**	.137	1.147	1.107–1.187	<.001
Croatia	Boys	29.4	31.7	32.7	38.7	32.9	.058	1.060	1.012–1.110	.013
	Girls	34.1	34.5	35.3	39.4	**48.4**	.149	1.160	1.112–1.211	<.001
Czechia	Boys	27.6	30.8	30.6	31.0	32.9	.051	1.052	1.011–1.095	.012
	Girls	29.6	**41.8**	**42.7**	**38.0**	**42.7**	.091	1.096	1.055–1.137	<.001
Denmark	Boys	24.0	35.4	34.7	31.3	30.0	.049	1.050	.990–1.113	.103
	Girls	**31.2**	38.8	**42.9**	**42.5**	**39.8**	.106	1.112	1.054–1.174	<.001
England	Boys	59.1	59.5	49.9	52.3	61.3	−.038	.963	.915–1.012	.138
	Girls	**69.7**	**70.2**	**66.8**	**73.0**	**73.2**	.043	1.044	.990–1.100	.113
Estonia	Boys	55.3	46.3	38.4	44.9	46.4	−.069	.933	.890–.979	.004
	Girls	**67.2**	**52.0**	**47.3**	**59.2**	**59.9**	−.019	.981	.936–1.028	.432
Finland	Boys	45.1	41.3	53.8	53.8	52.5	.118	1.125	1.073–1.178	<.001
	Girls	**51.4**	**55.6**	**67.2**	**64.5**	**73.1**	.222	1.249	1.191–1.310	<.001
France	Boys	19.5	17.1	17.4	21.1	23.1	.067	1.069	1.021–1.119	.005
	Girls	**31.8**	**37.3**	**29.3**	**36.3**	**36.8**	.041	1.042	1.003–1.082	.035
Germany	Boys	28.9	22.8	25.9	27.3	27.4	.016	1.016	.967–1.068	.522
	Girls	27.9	24.9	27.9	**35.3**	30.8	.088	1.092	1.044–1.142	<.001
Greece	Boys	52.7	43.3	43.3	34.6	30.2	−.225	.799	.759–.840	<.001
	Girls	**63.1**	**56.0**	**56.1**	**53.6**	**42.3**	−.177	.838	.798–.879	<.001
Greenland	Boys	35.0	19.7	23.3	27.5	15.3	−.144	.866	.760–.988	.032
	Girls	28.4	**28.2**	21.6	23.1	16.5	−.163	.850	.750–.963	.011
Hungary	Boys	30.9	27.3	22.4	18.6	27.1	−.089	.915	.858–.975	.006
	Girls	29.6	27.0	20.9	24.3	**35.3**	.035	1.036	.982–1.092	.196
Ireland	Boys	42.0	47.4	44.6	48.2	52.3	.076	1.079	1.020–1.141	.008
	Girls	**48.9**	**60.5**	**57.7**	**66.1**	**65.0**	.160	1.174	1.115–1.235	<.001
Italy	Boys	40.8	51.7	47.1	51.4	52.5	.088	1.092	1.037–1.151	.001
	Girls	**54.0**	**67.2**	**55.4**	**72.1**	**74.3**	.202	1.224	1.163–1.287	<.001
Latvia	Boys	35.5	36.3	26.5	32.8	28.0	−.083	.920	.871–.972	.003
	Girls	**47.1**	38.6	29.6	**43.7**	**41.1**	−.017	.983	.936–1.031	.479
Lithuania	Boys	62.8	48.8	46.8	50.4	53.5	−.089	.915	.875–.957	<.001
	Girls	**72.7**	**62.7**	**57.6**	**57.7**	**70.1**	−.070	.933	.890–.977	.003
Netherlands	Boys	17.3	20.5	16.6	27.3	32.8	.220	1.247	1.176–1.322	<.001
	Girls	**27.8**	28.2	**31.3**	**39.8**	**52.3**	.277	1.319	1.255–1.387	<.001
North Macedonia	Boys	49.0	37.5	47.4	49.6	52.6	.090	1.094	1.045–1.146	<.001
	Girls	**56.1**	41.5	**52.4**	**60.4**	**63.8**	.150	1.162	1.110–1.216	<.001
Norway	Boys	41.4	47.4	45.4	36.7	45.9	−.007	.993	.939–1.050	.795
	Girls	**51.7**	**58.4**	**58.9**	**65.3**	**66.4**	.156	1.169	1.105–1.236	<.001
Poland	Boys	57.5	58.3	23.1	31.6	33.9	−.320	.726	.695–.759	<.001
	Girls	**67.6**	**68.0**	**31.0**	**44.5**	**56.2**	−.199	.820	.787–.853	<.001
Portugal	Boys	57.7	60.7	55.2	41.7	49.1	−.155	.856	.810–.905	<.001
	Girls	**64.5**	**73.1**	**76.3**	**67.4**	**72.6**	.027	1.027	.971–1.087	.345
Russia	Boys	33.7	32.2	32.2	22.1	19.8	−.181	.834	.797–.874	<.001
	Girls	**40.4**	**36.5**	**37.7**	28.2	**25.1**	−.170	.844	.811–.878	<.001
Scotland	Boys	46.5	34.3	46.2	60.9	56.6	.232	1.261	1.202–1.324	<.001
	Girls	**59.3**	**44.5**	**60.2**	**79.5**	**75.7**	.358	1.431	1.360–1.505	<.001
Slovenia	Boys	50.8	53.7	47.9	41.6	42.6	−.120	.887	.846–.929	<.001
	Girls	56.2	**65.2**	**60.3**	**66.9**	**72.0**	.143	1.153	1.097–1.213	<.001
Spain	Boys	57.7	56.6	59.4	60.2	61.1	.048	1.049	1.007–1.093	.023
	Girls	**64.7**	56.2	**64.0**	**69.9**	**70.9**	.139	1.149	1.103–1.197	<.001
Sweden	Boys	42.7	42.7	31.0	34.4	48.1	.005	1.005	.959–1.053	.841
	Girls	**67.4**	**67.4**	**53.2**	**60.1**	**72.9**	.019	1.019	.973–1.068	.420
Switzerland	Boys	21.9	24.9	27.2	26.0	26.2	.046	1.047	.999–1.097	.057
	Girls	**25.9**	**31.6**	28.2	**31.5**	**32.9**	.067	1.070	1.023–1.119	.003
Ukraine	Boys	30.6	33.6	28.4	19.3	24.3	−.132	.876	.835–.919	<.001
	Girls	**38.6**	**41.3**	**34.2**	17.9	27.0	−.216	.806	.771–.843	<.001
Wales	Boys	62.7	62.5	54.5	48.9	54.1	−.097	.908	.872–.944	<.001
	Girls	**73.4**	**68.0**	**62.3**	**66.5**	**74.8**	.065	1.068	1.023–1.114	.003

If there is a significant difference between genders, the prevalence is written in bold for the gender with the highest prevalence ($p < .05$). Values indicate change in school pressure across survey years (overall trend).
B = regression coefficient; OR = odds ratio; 95% CI = 95% confidence interval.

Table 4
Co-occurrence patterns of school satisfaction and school pressure among 15-year-old students in the 2017/2018 HBSC edition, by gender and country

Country	Gender	Not pressured, not highly satisfied	Not pressured, highly satisfied	Pressured, not highly satisfied	Pressured, highly satisfied	Gender dif. p (ϕ)
Austria	Boys (n = 614)	48.9%	22.1%	26.9%	2.1%	.03 (.082)
	Girls (n = 729)	46.6%	17.7%	32.2%	3.4%	
	Total (n = 1,343)	**47.7%**↑	**19.7%**↑	**29.8%**↓	**2.8%**↓	
Belgium (Flemish)	Boys (n = 669)	59.9%	7.6%	31.7%	.7%	.15 (.062)
	Girls (n = 721)	54.9%	7.5%	36.1%	1.5%	
	Total (n = 1,390)	**57.3%**↑	**7.6%**↓	**34.0%**↓	**1.2%**↓	
Belgium (French)	Boys (n = 427)	**56.7%**	8.9%	30.2%	4.2%	< .001 (.274)
	Girls (n = 458)	31.0%	8.5%	**50.4%**	**10.0%**	
	Total (n = 885)	43.4%	8.7%	40.7%	7.2%	
Canada	Boys (n = 2031)	**37.8%**	11.4%	44.2%	6.5%	<. 001 (.157)
	Girls (n = 2163)	25.1%	8.9%	**57.0%**	**9.1%**	
	Total (n = 4,194)	**31.2%**↓	10.1%	**50.8%**↑	**7.8%**↑	
Croatia	Boys (n = 1,009)	**55.6%**	**11.2%**	31.0%	2.2%	< .001 (.170)
	Girls (n = 1,024)	45.1%	6.5%	**47.0%**	1.4%	
	Total (n = 2033)	**50.3%**↑	**8.9%**↓	39.1%	**1.8%**↓	
Czechia	Boys (n = 1,921)	**60.7%**	6.4%	31.1%	1.8%	< .001 (.104)
	Girls (n = 1,873)	51.1%	6.2%	**40.0%**	2.7%	
	Total (n = 3,794)	**56.0%**↑	**6.3%**↓	**35.5%**↓	**2.2%**↓	
Denmark	Boys (n = 370)	54.1%	15.9%	26.2%	3.8%	.008 (.127)
	Girls (n = 369)	46.6%	13.6%	**37.7%**	2.2%	
	Total (n = 739)	**50.3%**↑	**14.7%**↑	**31.9%**↓	**3.0%**↓	
England	Boys (n = 403)	**31.5%**	7.2%	55.3%	6.0%	.001 (.139)
	Girls (n = 409)	22.2%	4.4%	**68.7%**	4.6%	
	Total (n = 812)	**26.8%**↓	**5.8%**↓	**62.1%**↑	5.3%	
Estonia	Boys (n = 752)	**47.6%**	6.0%	43.8%	2.7%	< .001 (.137)
	Girls (n = 779)	35.8%	4.2%	**57.1%**	2.8%	
	Total (n = 1,531)	41.6%	**5.1%**↓	**50.6%**↑	**2.7%**↓	
Finland	Boys (n = 526)	**41.6%**	5.9%	47.9%	4.6%	< .001 (.218)
	Girls (n = 542)	22.1%	4.8%	**66.8%**	6.3%	
	Total (n = 1,068)	**31.7%**↓	**5.3%**↓	**57.5%**↑	5.4%	
France	Boys (n = 1,093)	**65.9%**	11.0%	20.2%	2.9%	< .001 (.158)
	Girls (n = 1,186)	51.3%	11.8%	**31.3%**	**5.6%**	
	Total (n = 2279)	**58.3%**↑	11.4%	**26.0%**↓	**4.3%**↓	
Germany	Boys (n = 649)	56.7%	15.9%	25.0%	2.5%	.555 (.037)
	Girls (n = 855)	53.9%	15.3%	27.7%	3.0%	
	Total (n = 1,504)	**55.1%**↑	**15.6%**↑	**26.5%**↓	**2.8%**↓	
Greece	Boys (n = 651)	**63.3%**	6.5%	28.1%	2.2%	< .001 (.130)
	Girls (n = 645)	51.6%	6.0%	**40.3%**	2.0%	
	Total (n = 1,296)	**57.5%**↑	**6.3%**↓	**34.2%**↓	**2.1%**↓	
Greenland	Boys (n = 136)	63.2%	21.3%	12.5%	2.9%	.015 (.200)
	Girls (n = 127)	73.2%	10.2%	16.5%	.0%	
	Total (n = 263)	**68.1%**↑	16.0%	**14.4%**↓	**1.5%**↓	
Hungary	Boys (n = 494)	**48.0%**	24.9%	18.6%	8.5%	.001 (.118)
	Girls (n = 634)	36.6%	28.1%	24.6%	10.7%	
	Total (n = 1,128)	41.6%	**26.7%**↑	**22.0%**↓	**9.8%**↑	
Ireland	Boys (n = 521)	**39.5%**	8.1%	47.4%	5.0%	< .001 (.141)
	Girls (n = 552)	27.2%	7.8%	**56.7%**	8.3%	
	Total (n = 1,073)	**33.2%**↓	**7.9%**↓	**52.2%**↑	6.7%	
Italy	Boys (n = 577)	**40.7%**	**6.6%**	49.9%	2.8%	< .001 (.227)
	Girls (n = 710)	22.8%	3.1%	**68.0%**	6.1%	
	Total (n = 1,287)	**30.8%**↓	**4.7%**↓	**59.9%**↑	4.6%	
Latvia	Boys (n = 653)	**56.2%**	15.6%	24.0%	4.1%	< .001 (.142)
	Girls (n = 681)	47.0%	11.9%	**36.9%**	4.3%	
	Total (n = 1,334)	**51.5%**↑	**13.7%**↑	**30.6%**↓	4.2%	
Lithuania	Boys (n = 569)	**36.7%**	9.8%	35.3%	18.1%	< .001 (.210)
	Girls (n = 606)	19.6%	10.2%	38.9%	**31.2%**	
	Total (n = 1,175)	**27.9%**↓	10.0%	37.2%	**24.9%**↑	
Netherlands	Boys (n = 712)	**57.6%**	9.6%	30.5%	2.4%	< .001 (.218)
	Girls (n = 796)	36.4%	11.3%	**47.0%**	5.3%	
	Total (n = 1,508)	**46.4%**↑	10.5%	39.2%	**3.9%**↓	
North Macedonia	Boys (n = 720)	**24.9%**	22.4%	36.5%	16.3%	< .001 (.114)
	Girls (n = 756)	17.7%	18.5%	**44.2%**	19.6%	
	Total (n = 1,476)	**21.2%**↓	**20.4%**↑	40.4%	**18.0%**↑	
Norway	Boys (n = 301)	**38.5%**	15.6%	33.6%	12.3%	< .001 (.233)
	Girls (n = 329)	19.1%	14.3%	**52.3%**	14.3%	
	Total (n = 630)	**28.4%**↓	**14.9%**↑	43.3%	**13.3%**↑	

(*continued on next page*)

Table 4
Continued

Country	Gender	Not pressured, not highly satisfied	Not pressured, highly satisfied	Pressured, not highly satisfied	Pressured, highly satisfied	Gender dif. p (ϕ)
Poland	Boys (n = 847)	**45.7%**	**20.3%**	27.5%	6.5%	< .001 (.227)
	Girls (n = 927)	30.7%	13.1%	**48.3%**	7.9%	
	Total (n = 1,774)	**37.9%**↓	**16.5%**↑	38.4%	7.2%	
Portugal	Boys (n = 634)	**46.2%**	4.7%	45.7%	3.3%	< .001 (.247)
	Girls (n = 730)	24.1%	3.3%	**65.1%**	**7.5%**	
	Total (n = 1,364)	**34.4%**↓	**4.0%**↓	**56.1%**↑	5.6%	
Russia	Boys (n = 816)	67.9%	12.3%	18.6%	1.2%	.066 (.064)
	Girls (n = 935)	62.8%	12.1%	23.7%	1.4%	
	Total (n = 1,751)	**65.2%**↑	12.2%	**21.4%**↓	**1.3%**↓	
Scotland	Boys (n = 672)	**35.6%**	7.9%	50.1%	6.4%	< .001 (.208)
	Girls (n = 729)	18.2%	6.0%	**67.8%**	8.0%	
	Total (n = 1,401)	**26.6%**↓	**6.9%**↓	**59.3%**↑	7.2%	
Slovenia	Boys (n = 894)	**29.5%**	**28.0%**	30.9%	11.6%	< .001 (.297)
	Girls (n = 810)	14.7%	13.3%	**51.2%**	**20.7%**	
	Total (n = 1,704)	**22.5%**↓	**21.0%**↑	40.6%	**16.0%**↑	
Spain	Boys (n = 744)	**34.5%**	4.4%	54.7%	6.3%	< .001 (.143)
	Girls (n = 788)	22.5%	6.3%	61.3%	9.9%	
	Total (n = 1,532)	**28.3%**↓	**5.4%**↓	**58.1%**↑	**8.2%**↑	
Sweden	Boys (n = 747)	**41.0%**	**11.0%**	43.9%	4.1%	< .001 (.256)
	Girls (n = 811)	20.6%	6.5%	**67.7%**	5.2%	
	Total (n = 1,558)	**30.4%**↓	8.7%	**56.3%**↑	4.7%	
Switzerland	Boys (n = 1,179)	**59.6%**	14.2%	24.3%	1.9%	.001 (.086)
	Girls (n = 1,167)	53.0%	14.1%	29.1%	3.8%	
	Total (n = 2346)	**56.4%**↑	**14.2%**↑	**26.7%**↓	**2.8%**↓	
Ukraine	Boys (n = 1,019)	51.5%	24.2%	18.6%	5.6%	.347 (.041)
	Girls (n = 975)	48.3%	24.6%	21.6%	5.4%	
	Total (n = 1,994)	**49.9%**↑	**24.4%**↑	**20.1%**↓	5.5%	
Wales	Boys (n = 2040)	**40.8%**	5.1%	49.8%	4.3%	< .001 (.223)
	Girls (n = 2033)	21.8%	3.4%	**71.0%**	3.8%	
	Total (n = 4,073)	**31.3%**↓	**4.3%**↓	**60.4%**↑	**4.0%**↓	

For significant gender differences with a noticeable effect size ($p < .05$, $\phi \geq .10$), bolded values are used to indicate the gender with a higher than expected prevalence (as indicated by corrected zres ≥3). Percentages in bold within the Total category are used to highlight main country differences (as indicated by corrected zres ≥3); in this case, ↑ or ↓ have been added to indicate whether the percentage in bold represents an overrepresentation or underrepresentation of students in that group in comparison with other countries.
n = Number included in the analysis.

noticeable effect size, these can be summarized as follows. according to corrected z residuals (corrected z residuals ≥ 3 are indicated by percentages in bold in Table 4), we find a higher than expected proportion of boys in the not pressured—not highly satisfied group in all the countries, with the exception of Denmark and Greenland. In addition, there is a higher than expected presence of girls among students feeling pressured (especially in the pressured—not highly satisfied group), except for Greenland, Hungary, and Spain.

In addition, we found significantly different distributions of the students in the four examined groups (not pressured—not highly satisfied, not pressured—highly satisfied, pressured—not highly satisfied, and pressured—highly satisfied) across countries; $X^2 = 7895.323$, $p < .001$; $\phi = .389$. The inspection of standardized residuals can be used to identify countries with higher or lower than expected proportions of students in some groups (see values highlighted in bold and followed by ↑↓ symbols in Table 4). In this regard, our results suggest that there is an overrepresentation of students in the not pressured—not highly satisfied group in the following 14 countries: Austria, Belgium (Flemish), Croatia, Czechia, Denmark, France, Germany, Greece, Greenland, Latvia, Netherlands, Russia, Switzerland, and Ukraine. In addition, a higher than expected proportion of students in the high satisfaction groups (not pressured—highly satisfied and pressured—highly satisfied) is found in Hungary, North Macedonia, Norway, and Slovenia, whereas a lower-than-expected proportion in high satisfaction groups is found in Belgium (Flemish), Croatia, Czechia, Estonia, Greece, and Wales. Finally, in Canada and Spain, there is an overrepresentation of students feeling pressured (pressured—not highly satisfied and pressured—highly satisfied groups) compared to the remaining countries.

Discussion

The main objective of this study was to examine the trends in school satisfaction and school pressure over the past decades, from 2002 to 2018, as well as the profiles in school pressure and school satisfaction, among 15-year-old students, in the HBSC countries.

Despite the variability across countries, two predominant trends are worth noting; high school satisfaction tended to increase over this time period among boys, whereas the feeling of being pressured by schoolwork increased among girls. These findings represent a positive development among boys, whereas the observed development among girls is worrying.

There were also clear trends in gender differences. A gender difference was found in school satisfaction (i.e., more girls than boys like school a lot) in almost half of the countries in the early 2000s. However, gender differences gradually disappeared from

2002 to 2018 as a result of more boys liking school a lot in numerous countries. As a consequence, in a majority of the countries analyzed, there was no longer a gender difference in school satisfaction in 2017/2018 and, where gender differences remained, there was no consistency across countries in whether boys or girls had higher school satisfaction. In contrast, gender differences in perceived school pressure (i.e., girls feel more pressured by schoolwork than boys) already existed in the majority of countries in the early 2000s and have expanded to more countries over the past two decades. This is mainly due to increased school pressure among girls in several countries. This is in line with research showing that school burnout is more prevalent among girls compared to boys [36]. As a result, perceived school pressure was higher among girls than boys in all except three analyzed countries in 2017/2018.

The results of co-occurrence of school pressure and school satisfaction in 2017/2018 show that the majority of students are found in the "not pressured—not highly satisfied" and "pressured—not highly satisfied" groups, but there are significant differences in the proportions in each group across countries. The findings support previous research showing the association between school pressure and low school engagement [37], as the group "pressured—not highly satisfied" is numerous in many countries. There was a higher presence than expected of "not pressured—not highly satisfied" students, the disengaged students, in many countries. It has been shown that the less engaged students show lower academic achievement [27], so the relatively high occurrence of "not pressured—not highly satisfied" students is a challenge within the education system, and especially for countries characterized by an overrepresentation of students in this group. The prevalence of students belonging to the group "not pressured—highly satisfied" varied among countries, but generally few students in the 32 countries belonged to this group, which from a public health perspective may be seen as the most desirable group. High school satisfaction and low school pressure are both associated with lower levels of risk behaviors, as well as with higher self-rated health and decreased somatic and psychological symptoms. The group "pressured—highly satisfied" accounts for less than 10% of students in all countries, except four.

The analyses of the co-occurrence of school pressure and school satisfaction also showed gender differences in the distribution of students among the four groups in most countries. Specifically, there were more boys than girls in the group characterized as "not pressured—not highly satisfied", the disengaged students, and a greater presence of girls than of boys in the group of "pressured—not highly satisfied" students. This is in line with results from the Programme for International Student Assessment 2015 that provides indicators of how motivated students are to achieve both in school and beyond. Girls were more likely than boys to report that they want top grades at school and that they care about being able to select among the best opportunities when they graduate [38] and girls generally perform better at school than boys [39]. Girls also give greater importance to academic achievement than boys [40] and seem to care more than boys that their efforts at school are properly recognized, although they were less likely than boys to report that they are ambitious or competitive. The latter may be understood in light of modernization theory where self-expression in terms of performing well is becoming more dominant as a consequence of economic growth and equal opportunities [41]. In this context, girls seem to put higher pressure on themselves compared to boys, as also observed in other studies [42,43]. It has also been noted that students who like school but also feel high levels of school pressure are usually the ones having strong orientation toward school and that they might be at risk of school exhaustion and tiredness [36].

Finally, looking at the results as a whole, some country findings can be highlighted. For example, North Macedonia and the Netherlands experienced significant decreases in school satisfaction and increases in school pressure from 2002 to 2018, which is a focus of concern. Marked decreases in school satisfaction in Greece, Portugal, and Wales should also receive attention. On the other hand, in Lithuania, Poland, and Ukraine, there were marked increasing trends in school satisfaction and decreasing trends in school pressure in both boys and girls. This must be noted as a positive pattern, although there still is room for improvement, since Ukraine was one of the countries with an overrepresentation of students in the disengaged group (not pressured—not highly satisfied) in the latest survey round. A note of caution is also needed for Spain and Canada whose students were overrepresented in the two groups including high school pressure.

As the previous examples illustrate, no common trends or profiles based on geographical location (i.e., Mediterranean countries, Eastern Europe, Nordic countries, etc.) were apparent. For instance, among Mediterranean countries, marked decreases in school satisfaction were found in Greece and Portugal, whereas Spain characterized by an overrepresentation of students feeling pressured by schoolwork. A lack of clear geographical patterns may be attributed to the diversity of educational systems between geographically proximate countries [44]. However, interpreting our findings according to differences in educational systems was equally challenging. Greece, Portugal and Spain show differing results despite being essentially comprehensive systems with a common core curriculum for all students [34]. In other cases, relatively similar trends were found among countries with markedly different educational systems, such as the Netherlands—a system with early tracking and several differentiated educational branches [33]— and North Macedonia, where the general education provision during compulsory education is common for all students [34].

The present study has some limitations. First, both school satisfaction and school pressure are measured with single items. These are multifaceted phenomena, and single-item measures may have lower reliability than composite scales, since our measures can capture only some part of the whole spectrum of school pressure and school satisfaction. However, previous studies on HBSC data have shown strong associations between both school satisfaction and school pressure, either in analyses of individual indicators or as part of a combined measure of students' perception of school, and several health outcomes and health behaviors [45–47]. Second, dichotomizing the variables school satisfaction and school pressure means that some variance on students' school experience is lost. However, this was deemed necessary to present a more parsimonious summary of results given the wealth of information in the present study.

Despite the aforementioned limitations, this study is based on cross-national data collected according to an international standardized protocol ensuring high validity of comparisons across national setting. Our study presents a rich international view on school satisfaction and school pressure including trends and patterns of co-occurrence. Future lines of research can be proposed following this study. In addition to gender differences,

it may be interesting to incorporate other sociodemographic factors. As part of our preliminary analyses, we had considered including family affluence but its effects were negligible; however, we were not able to analyze other potentially relevant factors such as migration background. Exploring the role of contextual factors (e.g., family expectations and educational level, teachers' and classmates' support) in the explanation of differences in school satisfaction and school pressure can be another interesting next step following this study. It would also be beneficial to analyze the links between the identified patterns of satisfaction and pressure and school performance. Last but not least, direct examination of the impact of national policies and educational changes in countries with positive and concerning results in school satisfaction and school pressure could also contribute to move this area of research forward.

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